

1/9

FIGURE 1A

2/9

389	CTG	ACG	TGG	GAT	GTG	AAG	GAC	ACG	CTG	CTC	AGG	CTC	CGC	CAC	CCC	TTA	GGG	GAG
L	T	W	D	V	K	D	T	L	L	R	L	R	H	P	L	G	E	
443	GCC	TAT	GCC	ACC	AAG	GCC	CGG	GCC	CAT	GGG	CTG	GAG	GTG	GAG	CCC	TCA	GCC	CTG
A	Y	A	T	K	A	R	A	H	G	L	E	V	E	P	S	A	L	
497	GAA	CAA	GGC	TTC	AGG	CAG	GCA	TAC	AGG	GCT	CAG	AGC	CAC	AGC	TTC	CCC	AAC	TAC
E	Q	G	F	R	Q	A	Y	R	A	Q	S	H	S	F	P	N	Y	
551	GGC	CTG	AGC	CAC	GGC	CTA	ACC	TCC	CGC	CAG	TGG	TGG	CTG	GAT	GTG	GTC	CTG	CAG
G	L	S	H	G	L	T	S	R	Q	W	W	L	D	V	V	L	Q	
605	ACC	TTC	CAC	CTG	GGC	GGT	GTC	CAG	GAT	GCT	CAG	GCT	GTA	GCC	CCC	ATC	GCT	GAA
T	F	H	L	A	G	V	Q	D	A	Q	A	V	A	P	I	A	E	
659	CAG	CTT	TAT	AAA	GAC	TTC	AGC	CAC	CCC	TGC	ACC	TGG	CAG	GTG	TTG	GAT	GGG	GCT
Q	L	Y	K	D	F	S	H	P	C	T	W	Q	V	L	D	G	A	
713	GAG	GAC	ACC	CTG	AGG	GAG	TGC	CGC	ACA	CGG	GGT	CTG	AGA	CTG	GCA	GTG	ATC	TCC
E	D	T	L	R	E	C	R	T	R	G	L	R	A	V	I	S		

FIGURE 1B

3/9

AAC	TTT	GAC	CGA	CGG	CTA	GAG	GGC	ATC	CTG	GGG	GGC	CTT	GGC	CTG	CGT	GAA	CAC	812
N	F	D	R	R	L	E	G	I	L	G	G	L	G	L	R	E	H	
821		830			839				848				857			866		
TTC	GAC	TTT	GTG	CTG	ACC	TCC	GAG	GCT	GCT	TGG	CCC	AAG	CCG	GAC	CCC	CGC		
F	D	F	V	L	T	S	E	A	A	G	W	P	K	P	D	P	R	
875		884			893				902				911			920		
ATT	TTC	CAG	GAG	GCC	TTG	CGG	CTT	GCT	CAT	ATG	GAA	CCA	GTA	GTG	GCA	GCC	CAT	
I	F	Q	E	A	L	R	L	A	H	M	E	P	V	V	A	A	H	
929		938			947				956				965			974		
GTT	GGG	GAT	AAT	TAC	CTC	TGC	GAT	TAC	CAG	GGG	CCT	CGG	GCT	GTG	GGC	ATG	CAC	
V	G	D	N	Y	L	C	D	Y	Q	G	P	R	A	V	G	M	H	
983		992			1001				1010				1019			1028		
AGC	TTC	CTG	GTG	GTG	GGC	CCA	CAG	GCA	CTG	GAC	CCC	GTG	GTC	AGG	GAT	TCT	GTA	
S	F	L	V	V	G	P	Q	A	L	D	P	V	V	R	D	S	V	
1037		1046			1055				1064				1073			1082		
CCT	AAA	GAA	CAC	ATC	CTC	CCC	TCT	CTG	GCC	CAT	CTC	CTG	CCT	GCC	CTT	GAC	TGC	
P	K	E	H	I	L	P	S	L	A	H	L	L	P	A	L	D	C	
1091		1100			1109				1118				1127			1136		
CTA	GAG	GGC	TCA	ACT	CCA	GGG	CTT	TGA	GGC	CAG	TGA	GGG	AAG	TGG	CTG	GGC	CCT	
L	E	G	S	T	P	G	L											

FIGURE 1C

4/9

1145 1154 1163 1172 1181 1190
AGG CCA TGG AGA AAA CCT TAA ACA AAC CCT GGA GAC AGG GAG CCC CCT CTG TCT

1199 1208 1217 1226 1235 1244
CCA CAG CTC TGG ACC TTT CCC CCT CTC CCG GCC TTT GTC ACC TAC TGT GAT

1253 1262 1271 1280 1289
AAT AAA GCA GTG AGT GCT GAG CTC TCA CCC TTC CCC CAC TAA AAA AAA AA 3'

FIGURE 1D

09-889236

5/9

5'	CCA	CGC	GTC	CGG	TTC	CGT	TCA	ACG	AAG	TGG	TTG	CTT	TTA	GTT	CCG	GCA	ATG	M
																		55
	10	19	28	37	46													
	64	73	82	91	100													109
S	C	G	A	C	G	CCC	CGC	CTT	TGG	CGG	CTG	CGC	CCA	GGG	GCC			
R	R	S	L	S	A	P	R	L	W	R	L	R	P	G	A			
	118	127	136	145	154													163
G	G	GGG	TCC	CTC	TCA	GCT	TAT	GGA	AGA	AGA	ACC	AGT	GTC	AGA	TTT	CGC	AGT	TCA
D	H																	
	172	181	190	199	208													217
G	M	T	L	D	N	I	S	R	A	A	V	D	R	I	I	R	V	
	226	235	244	253	262													271
GAT	CAT	GCA	GGC	GAA	TAT	GGA	GCA	AAC	CGC	ATC	TAT	GCC	GGG	CAG	ATG	GCT	GTC	
D	H	A	G	E	Y	G	A	N	R	I	Y	A	G	Q	M	A	V	
	280	289	298	307	316													325
L	G	R	T	S	V	G	P	V	I	Q	K	M	W	D	Q	E	K	
	334	343	352	361	370													379
GAC	CAT	TTG	AAA	AAG	TTC	AAT	GAG	TTG	ATG	TTG	ATG	TTC	AGG	GTC	CGG	CCA	ACA	
D	H	L	K	F	N	E	L	M	V	M	F	R	V	R	P	T		

FIGURE 2A

6/9

GTT	CTG	ATG	CCC	TTG	TGG	AAC	GTG	CTG	GGG	TTT	GCA	CTG	GGG	GCG	GGG	ACC	GCC	433
V	L	M	P	L	W	N	V	L	G	F	A	L	G	A	G	T	A	
442				451				460			469				478			487
TTG	CTC	GGG	AAG	GAA	GCT	GCC	ATG	GCC	TGC	ACC	GTG	GCG	GTG	GAA	GAG	AGC	ATA	
L	L	G	K	E	G	A	M	A	C	T	V	A	V	E	E	S	I	
496				505				514			523				532			541
GCA	CAT	CAC	TAC	AAC	CAG	ATC	AGG	ACG	CTG	ATG	GAG	GAG	GAC	CCT	GAA	AAA		
A	H	H	Y	N	N	Q	I	R	T	L	M	E	E	D	P	E	K	
550				559				568			577				586			595
TAC	GAG	GAA	CTT	CTT	CAG	CTG	ATA	AAG	AAA	TTT	CGG	GAT	GAA	GAG	CTT	GAG	CAC	
Y	E	E	L	L	Q	L	I	K	K	F	R	D	E	E	L	E	H	
604				613				622			631				640			649
CAT	GAC	ATA	GGC	CTC	GAC	CAT	GAT	GCA	GAA	TTG	GCT	CCA	GCC	TAT	GCC	GTC	CTG	
H	D	I	G	L	D	H	D	A	E	L	A	P	A	Y	A	V	L	
658				667				676			685				694			703
AAG	AGC	ATT	ATC	CAG	GCC	GGG	TGC	AGA	GTG	GCG	ATA	TAT	TTA	TCA	GAA	AGA	TTA	
K	S	I	I	Q	A	G	C	R	V	A	I	Y	L	S	E	R	L	
712				721				730			739				748			757
TAA	AGT	GTC	TCC	AGT	TTT	GCC	TGT	CTA	TAA	AAG	ATG	ATA	GTA	ATT	TAC	CAA	GTG	

FIGURE 2B

7/9

ACA	TTT	GCA	GAC	AAA	CAG	GTG	TAC	AGT	TAT	CGT	TGT	ACT	TTT	GTA	CAA	TGT	GAA	811
																		766
																		775
																		784
																		793
																		802
																		811
																		820
																		829
																		838
																		847
																		856
																		865
																		874
																		883
																		892
																		899
																		901
																		910
																		919
																		928
																		937
																		937
																		TCA
																		AGT
																		TAC
																		AGC
																		AAA
																		CGA
																		AGC
																		TGG
																		G 3'

FIGURE 2C

8/9

1	M S C A G A A	- - - - -	- A A P R L W R L R P G A R R S S L S	2267905
1	M S A A G A I	- - - - -	- A A A S V G R L R T G V R R P F F S	g3415017
1	M A H R L Q I	R L L T W D V K D T L L R L R H P L G E A Y A	1581473	
1	M R S L S S R F R L I	T F D V T N T L L Q F R T T P G K Q Y G	g1561732	
25	A Y G R R T S V R F R S S G M T	- - - - -	- L D N I S R A A V D R I	2267905
25	E Y G R G L I T R C H S S G M T	- - - - -	- L D N I N R A A V D R I	g3415017
31	T K A R A H G L E V E P S A L E	Q G F R Q A Y R A Q S H S F	1581473	
31	E I G A L F G A R C D N N E L A K N F K A N W Y K M N R D Y	g1561732		
53	I R V D H A G E Y G A N R	- - - - -	- I Y A G Q M A	2267905
53	I R V D H A G E Y G A N R	- - - - -	- I Y A G Q M A	g3415017
61	P N Y G - - L S H G L T S R Q W W L D V V L Q T F H L A G V	1581473		
61	P N F G R D T N P Q M E W Q Q W W R K L I A G T F A E S S G A	g1561732		
73	V L G R T S V G P V I Q K M	- - - - -	- W D Q E K D H	2267905
73	V L G R T S V G P V I Q K M	- - - - -	- W D Q E K N H	g3415017
89	Q D A Q A - V A P I A E Q L Y K D F S H P C T W Q V L D G A	1581473		
91	A I P D E K L H N F S N H L I E L Y K T S I C W Q P C N G S	g1561732		
94	L K K F N E	- - - - -	- L M V M F R V R P T	2267905
94	L K K F N E	- - - - -	- L M I A F R V R P T	g3415017
118	E D T L R E	C R T R G L R - - -	- L A V I S N F D R R L E	1581473
121	V E L L Q O L R -	K E L K P E K C K L G V I A N F D P R L P	g1561732	

FIGURE 3A

9/9

110	V L M P	-	-	L W N V L G F A L G A G T A L L G K E G A M A	2267905
110	V L M P	-	-	L W N V A G F A L G A G T A L L G K E G A M A	g3415017
143	G I L G G L G	R E H F D F V I L T S E A A G W P K P D P R I	1581473		
150	T L L Q N T K L D Q Y L D F A I N S Y E V Q A E K P D P Q I	g1561732			
137	C T V A V E E S I A H H Y N N Q I R T L M E E D P E - K Y -	2267905			
137	C T V A V E E S I A N H Y N N Q I R M L M E E D P E - K Y -	g3415017			
173	F Q E A L R - - L A H M E P V V A A H V G D N Y L C D Y Q	1581473			
180	F Q K A M E K S G L K N L K P E E C L H I G D G P T T D Y L	g1561732			
165	- - - - - E E L L Q L I K F R D E E L E H H D I G L D	2267905			
165	- - - - - E E L L Q V I K Q F R D E E L E H H D T G L D	g3415017			
200	G P R A V G M H S F L V V G P Q A L D P V V R - - D S V P	1581473			
210	A A K E L G W H S A L V H E - K S Y A Y L V K K Y G E D I D	g1561732			
188	H D A E L A P A Y A V L K S I I Q A G C R V A I Y L S E R L	2267905			
188	H D A E L A P A Y A L L K R I I Q A G C S A I Y L S E R F	g3415017			
227	K E H I L P S L A H L P A L - - D C L E G S - - T P G L	1581473			
239	R D H V F P P S L Y D F H K K - - - - I S D G - - A V V W	g1561732			

FIGURE 3B